

IN THE CLAIMS:

What is claimed is:

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1. ~~In a solid-state imaging device comprising a two-dimensional arrayed pixel provided with a photo-electric conversion unit for photo-electric converting an incident light to a signal charge and a vertical register for transferring said signal charge or a vertical register having a photo-electric conversion function for transferring a signal charge produced by photo-electric converting an incident light and a horizontal register for receiving and transferring said signal charge transferred by said vertical register, A method of driving a solid-state imaging device being characterized by comprising the steps of:~~

~~mixing signal charges of pixels distant from each other on one row in the horizontal direction transferred to said a horizontal register from said a vertical register within said horizontal register; and~~

~~transferring said mixed signal charge in the horizontal direction.~~

2. (Amended Once) A method of driving a solid-state imaging device as claimed in claim 1, ~~characterized in that, further comprising,~~ after said signal charges of pixels distant from each other on said one row are separately transferred from said vertical register to said horizontal register and one signal charge is transferred to said horizontal register, said one signal charge is transferred within said horizontal register and the other signal charge is transferred to said horizontal register, in which said signal charges are mixed.

3. (Amended Once) A method of driving a solid-state imaging device as claimed in claim 2, ~~characterized in that, further comprising,~~ when said signal charges of pixels distant from each other on said one row are transferred from said vertical register to said

horizontal register, said signal charges are transferred at every said vertical register of ~~adjacent predetermined column.~~

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4. (Amended Once) A method of driving a solid-state imaging device as claimed in claim 1, ~~characterized in~~ wherein that said pixel has a color filter thereon and pixels distant from each other on said one row are same in color.

5. (Amended Once) ~~In a~~ A solid-state imaging element having a photo-electric conversion means for photo-electric converting ~~an~~ incident light to a signal charge and a vertical transferring means for transferring said signal charge in a vertical direction and a horizontal register for receiving and transferring said signal charge transferred by said vertical transferring means in a horizontal direction, further comprising:

~~a solid-state imaging device being characterized in that~~ a transfer gate unit is provided between said vertical transferring means and said horizontal register, and a transfer electrode of a first and a second phase, ~~which form of~~ said transfer gate unit, are disposed alternately ~~at every constant column of said~~ at every set of prescribed column(s) of said vertical transferring means wherein pixels corresponding to each set of said prescribed column(s) of said vertical transferring means have a same color arrangement.

6. (Amended Once) A camera comprising:

a solid-state imaging device which has a two-dimensional ~~arrayed~~ pixel array provided with a photo-electric conversion unit for photo-electric converting ~~an~~ incident light to a signal charge and a vertical register for transferring said signal charge or a vertical register having a photo-electric conversion function for transferring a signal charge ~~produced~~ and a horizontal register for receiving and transferring said signal charge transferred by said vertical register, said camera operating in a first mode in which signal charge of pixels distant from each other ~~on one row~~ in the horizontal direction ~~and to be~~ are transferred from said

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vertical register and to said horizontal register are mixed within said horizontal register, said mixed signal charge is transferred in a horizontal direction and output, and said camera operating in a second mode in which said register charges are separately transferred in a horizontal direction as a signal charge of each pixel without being mixed within said horizontal register, said first and second modes being switchable.

7. (Not Modified) A camera as claimed in claim 6, wherein said first mode is such that said signal charges of pixels distant from each other on one row are transferred separately from said vertical register to said horizontal register, after one signal charge is transferred to said horizontal register, it is transferred within said horizontal register, the other signal charge is transferred to said horizontal register, and said signal charges are mixed.

8. (Amended Once) A camera as claimed in claim 7, wherein in said first mode, when said signal charges of pixels distant from each other ~~on said one row~~ are transferred from said vertical register to said horizontal register, said signal charges are transferred at every vertical register of adjacent constant columns.

9. (Not Modified) A camera as claimed in claim 6, wherein said pixel has a color filter thereon and pixels distant from each other on said one row are same in color.

10. (Amended Once) A camera as claimed in claim 6, wherein said solid-state imaging device has a transfer gate unit between said vertical register and said horizontal register and transfer electrodes of first and second phases, ~~which form~~ of said transfer gate unit, are alternately disposed at every constant column of said vertical register.